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EXAMINER	
PEPITONE, MICHAEL F	

ART UNIT	PAPER NUMBER
1796	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/524,301	KLETTKE ET AL.	
	Examiner	Art Unit	
	MICHAEL PEPITONE	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 November 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *15-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *15-33* is/are rejected.

7)☒ Claim(s) *28 and 29* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Applicant is advised that should claim 15 be found allowable, claim 28 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Applicant is advised that should claim 21 be found allowable, claim 29 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 15-20, 22-27, and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Nowak *et al.* (WO 01/923741). For the purpose of examination, by Nowak *et al.* (US 6,867,246) was used as the English translation of by Nowak *et al.* (WO 01/923741).

Regarding claim 15-16, 18-19, and 30: Nowak *et al.* teaches a composition (1:4-10) comprising N-alkylaziridino block copolymers (2:27-3:49) having molar masses in the range of 500 to 50,000 g/mol and up to 10 N-alkylaziridino groups (8:33-43). The block copolymers have aziridino equivalent masses that range from 250 to 2500 g/equivalent (8:44-47). Nowak *et al.* teaches N-alkylaziridino having a polyether structure without silicone blocks and with at least one N-alkylaziridino group and preferably two N-alkylaziridino groups (10:29-45). Nowak *et al.* teaches a specific composition {Table 1, B3} comprising 54.3 wt% of N-alkylaziridine block copolymer of synthesis example 6 (15:38-16:5) {corresponding to Z1} and 6.2 wt% of a mixture of monoaziridino polyethers prepared from a polyether diol which consists of ethylene oxide and tetrahydrofuran units in the molar ratio of 1:3.5 {corresponding to Z2} [corresponding to about 10.2 wt% of Z2 based on the total weight of Z1 and Z2, as calculated by examiner] {the monoaziridino polyether was substituted for the bisaziridino polyether (10:34-38) of ex. B3} (Table 1, B3) [see MPEP 2131.02].

Regarding claim 17: Nowak *et al.* teaches Z1 comprises a polyether having a portion of tetrahydrofuran units {synthesis ex. 6; n=3} (15:38-16:5).

Regarding claim 20: Nowak *et al.* teaches B3 comprises quartz powder {additive} (Table 1, B3).

Regarding claim 22 and 26-27: Nowak *et al.* teaches B3 {basic component} is mixed with catalysts paste K1 {prepared from separate containers or dynamic mixer} (12: 48-60; 16:20-28; Table 2, Use ex. 3).

Regarding claim 23-25: Nowak et *al.* teaches a dental impression material (12:43-47) having a Shore A hardness after 24 h of 49 (Table 2, Use ex. 3).

The Office realizes that all the claimed effects or physical properties are not positively stated by the reference. However, the reference teaches all of the claimed reagents and was prepared under similar conditions. Therefore, the claimed effects and physical properties, i.e. a Shore A hardness within 20 minutes of mixing base and catalyst at room temperature of at least 80% of the Shore A hardness reached after 24 h [instant claim 23]; an acceleration of the setting rate [instant claim 25], would implicitly be achieved by a composition with all the claimed ingredients. If it is the applicants' position that this would not be the case: (1) evidence would need to be presented to support applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties and effects with only the claimed ingredients.

Claims 21 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Nowak *et al.* (WO 01/923741). For the purpose of examination, by Nowak *et al.* (US 6,867,246) was used as the English translation of by Nowak *et al.* (WO 01/923741).

Regarding claims 21and 31: Nowak *et al.* teaches a process for preparing a composition (1:4-10; 16:60-67; Table 2, Use ex. 3) comprising N-alkylaziridino block copolymers (2:27-3:49) having molar masses in the range of 500 to 50,000 g/mol and up to 10 N-alkylaziridino groups (8:33-43). The block copolymers have aziridino equivalent masses that range from 250 to 2500 g/equivalent (8:44-47). Nowak *et al.* teaches N-alkylaziridino having a polyether structure without silicone blocks and with at least one N-alkylaziridino group and preferably two N-alkylaziridino groups (10:29-45). Nowak *et al.* teaches a specific composition {Table 1, B3} comprising 54.3 wt% of N-alkylaziridine block copolymer of synthesis example 6 (15:38-16:5)

{corresponding to Z1} and 6.2 wt% of a mixture of monoaziridino polyethers prepared from a polyether diol which consists of ethylene oxide and tetrahydrofuran units in the molar ratio of 1:3.5 {corresponding to Z2} [corresponding to about 10.2 wt% of Z2 based on the total weight of Z1 and Z2, as calculated by examiner] {the monoaziridino polyether was substituted for the bisaziridino polyether (10:34-38) of ex. B3} (Table 1, B3) [see MPEP 2131.02]. Nowak *et al.* teaches the process of mixing B3 with catalysts paste K1 (12:48-60; 16:20-28; Table 2, Use ex. 3).

Claims 28 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Nowak *et al.* (WO 01/923741). For the purpose of examination, by Nowak *et al.* (US 6,867,246) was used as the English translation of by Nowak *et al.* (WO 01/923741).

Regarding claim 28 and 32: Nowak *et al.* teaches a composition (1:4-10) comprising N-alkylaziridino block copolymers (2:27-3:49) having molar masses in the range of 500 to 50,000 g/mol and up to 10 N-alkylaziridino groups (8:33-43). The block copolymers have aziridino equivalent masses that range from 250 to 2500 g/equivalent (8:44-47). Nowak *et al.* teaches N-alkylaziridino having a polyether structure without silicone blocks and with at least one N-alkylaziridino group and preferably two N-alkylaziridino groups (10:29-45). Nowak *et al.* teaches a specific composition {Table 1, B3} comprising 54.3 wt% of N-alkylaziridine block copolymer of synthesis example 6 (15:38-16:5) {corresponding to Z1} and 6.2 wt% of a mixture of monoaziridino polyethers prepared from a polyether diol which consists of ethylene oxide and tetrahydrofuran units in the molar ratio of 1:3.5 {corresponding to Z2} [corresponding to about 10.2 wt% of Z2 based on the total weight of Z1 and Z2, as calculated by examiner] {the

monoaziridino polyether was substituted for the bisaziridino polyether (10:34-38) of ex. B3} (Table 1, B3) [see MPEP 2131.02].

Claims 29 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Nowak *et al.* (WO 01/923741). For the purpose of examination, by Nowak *et al.* (US 6,867,246) was used as the English translation of by Nowak *et al.* (WO 01/923741).

Regarding claims 29and 33: Nowak *et al.* teaches a process for preparing a composition (1:4-10; 16:60-67; Table 2, Use ex. 3) comprising N-alkylaziridino block copolymers (2:27-3:49) having molar masses in the range of 500 to 50,000 g/mol and up to 10 N-alkylaziridino groups (8:33-43). The block copolymers have aziridino equivalent masses that range from 250 to 2500 g/equivalent (8:44-47). Nowak *et al.* teaches N-alkylaziridino having a polyether structure without silicone blocks and with at least one N-alkylaziridino group and preferably two N-alkylaziridino groups (10:29-45). Nowak *et al.* teaches a specific composition {Table 1, B3} comprising 54.3 wt% of N-alkylaziridine block copolymer of synthesis example 6 (15:38-16:5) {corresponding to Z1} and 6.2 wt% of a mixture of monoaziridino polyethers prepared from a polyether diol which consists of ethylene oxide and tetrahydrofuran units in the molar ratio of 1:3.5 {corresponding to Z2} [corresponding to about 10.2 wt% of Z2 based on the total weight of Z1 and Z2, as calculated by examiner] {the monoaziridino polyether was substituted for the bisaziridino polyether (10:34-38) of ex. B3} (Table 1, B3) [see MPEP 2131.02]. Nowak *et al.* teaches the process of mixing B3 with catalysts paste K1 (12:48-60; 16:20-28; Table 2, Use ex. 3).

Response to Arguments

Applicant's arguments with respect to claims 15-29 have been considered but are moot in view of the new ground(s) of rejection.

The objection of claims 28-29 under 37 CFR 1.75 is maintained {see above}. Claims 15, 21, and 28-29 are listed below; the examiner maintains the position claims 15 and 28, and claims 21 and 29 are substantial duplicates {both cover the same thing}, despite a slight difference in wording.

Claim 15: A composition comprising at least the two components Z1 and Z2, wherein component Z1 comprises at least one polyaddition product or at least one polycondensation product having on average 2 aziridino groups or more and a molecular weight of at least 1000, and wherein component Z2 comprises at least one compound having only 1 aziridino group, at least one compound according to component Z2 differing, in its chemical make-up, from at least one compound according to component Z1 in at least one further feature other than the number of the aziridino groups, the difference from component Z1 comprising at least one or two or more of the following further features: i) number average of the molecular weight, ii) weight average of the molecular weight, iii) polydispersity, iv) composition of the polymer backbone, and v) end groups.

Claim 28: A composition comprising at least the two components Zl and Z2, wherein component Z1 comprises at least one polyaddition product or at least one polycondensation product having on average two aziridino groups or more and a molecular weight of at least 1000, and wherein component Z2 comprises at least one compound having only one aziridino group, and wherein the at least one compound having only one aziridino group differs, in its chemical

make-up, from at least one compound according to component Z1 in at least one further feature other than the number of the aziridino groups, the difference from component Z1 comprising at least one or two or more of the following further features: i) number average of the molecular weight, ii) weight average of the molecular weight, iii) polydispersity, iv) composition of the polymer backbone, and v) end groups.

Claim 21: A process for the preparation of a composition, comprising mixing two components Z1 and Z2 together, wherein component Z1 comprises at least one polyaddition product or at least one polycondensation product having on average 2 aziridino groups or more and a molecular weight of at least 1000, and wherein component Z2 comprises at least one compound having only 1 aziridino group, and at least one compound according to component Z2 differing, in its chemical make-up, from at least one compound according to component Z1 in at least one further feature other than the number of the aziridino groups, the difference from component Z1 comprising at least one or two or more of the following further features: i) number average of the molecular weight, ii) weight average of the molecular weight, iii) polydispersity, iv) composition of the polymer backbone, and v) end groups.

Claim 29: A process for the preparation of a composition, comprising mixing two components Z1 and Z2 together, wherein component Z1 comprises at least one polyaddition product or at least one polycondensation product having on average two aziridino groups or more and a molecular weight of at least 1000, and wherein component Z2 comprises at least one compound having only one aziridino group, and wherein the at least one compound having only one aziridino group differs, in its chemical make-up, from at least one compound according to component Z1 in at least one further feature other than the number of the aziridino groups, the

difference from component Z1 comprising at least one or two or more of the following further features: i) number average of the molecular weight, ii) weight average of the molecular weight, iii) polydispersity, iv) composition of the polymer backbone, and v) end groups.

It is noted that the claims are interpreted in light of the specification; however, limitations from the specification are not read into the claims. The features upon which applicant relies (i.e., optionally one or more additional compounds, having for example, 2, 3, or 4 aziridino groups) are not recited in the rejected claim(s). See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Therefore, the examiner believes the claims 15, 21, and 28-29 were given their broadest reasonable interpretation.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL PEPITONE whose telephone number is (571)270-3299. The examiner can normally be reached on M-F, 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MFP
11-March-10

/Mark Eashoo/
Supervisory Patent Examiner, Art Unit 1796